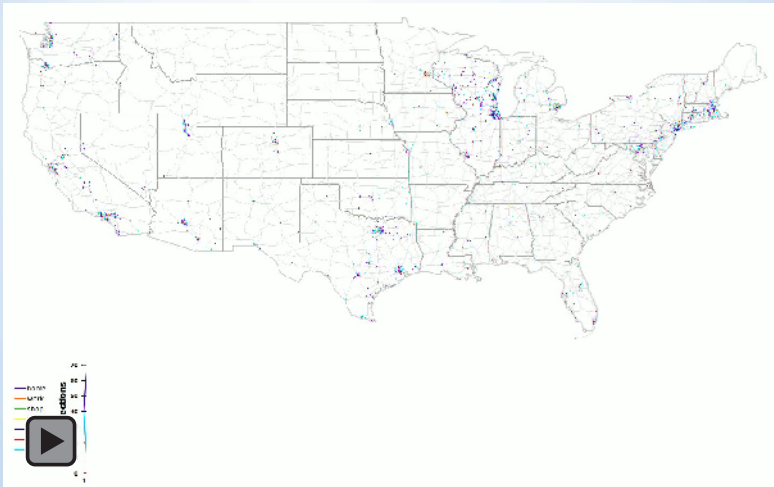


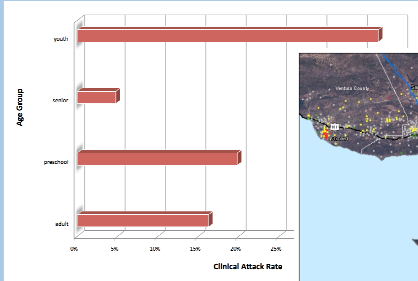
Using a Massive Agent-based Model to Study the Spread of Epidemics



EpiSimS simulation of Pandemic Influenza H1N1 spread throughout the US.

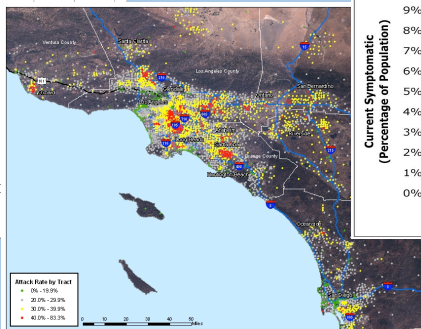
EpiSimS is a large-scale agent-based discrete-event engine that simulates the detailed person-to-person contact in synthetic populations. EpiSimS can simulate disease spread at sufficient fidelity to capture geospatially varying demographic characteristics, travel patterns of individuals, and transmission opportunities through household, work, school, social, and casual contacts.

Demographic Impacts



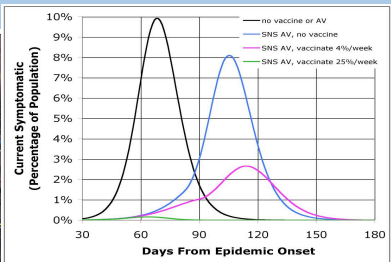
Children are more likely to become infected.

Geospatial Differentiation



Attack rate highly correlated with household size.

Pharmaceutical Interventions



Stockpile antivirals plus rapid early vaccine production saves lives.